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HIV Prevention and Injection Drug Use in Alberta

LITERATURE REVIEW

HIV PREVENTION AND NON PRESCRIPTION NEEDLE USE PROJECT

March 1996

Submitted by: Rick McHutchion
McHutchion & Associates Consulting

Submitted to: Provincial AIDS Program, Alberta Health

Alberta
HEALTH

FOREWORD

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A primary, and very efficient, means of HIV transmission is through the use of contaminated needles, syringes, vials, and other injection equipment. International, national and biomedical epidemiology all confirm that HIV transmission through injection drug use is a growing health concern. It is not possible, nor desirable, to isolate drug users from society at large.

The transmission of HIV among injection drug users ultimately reflects the role of HIV infection in various drug-using environments and the impact of social and cultural factors. A window of opportunity to control a disease is rarely lost, and a disease is becoming unmanageable.

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NPNU PROJECT OVERVIEW

In September 1995, the Provincial AIDS Program, Alberta Health initiated a project to conduct a three year (1995-1998) review and evaluation of HIV/AIDS Programming Issues Related to Non Prescription Needle Use¹ (NPNU) in Alberta.

The anticipated outcomes of the project include:

- a description and better understanding of the NPNU population in Alberta;
- recommendations for HIV prevention programming for the NPNU population;
- implementation of approved recommendations over a two year period; and
- evaluation of interim outcomes (long range outcomes will be evaluated later).

Phase 1 of the project (September 1995 to March 1996) included:

- a meeting of NPNU and HIV Prevention Programmers in Alberta;
- formation of an Advisory Committee (see Acknowledgements);
- an interpretive literature review;
- a NPNU programmer questionnaire;
- a NPNU/ex-users/client questionnaire; and
- recommendations for future programming.

Phases 2 and 3 (April 1996 to March 1998) will be determined by the outcome of Phase 1. It is anticipated that Phases 2 and 3 will include:

- decisions regarding, and implementation of, programming;
- development of an evaluation plan and instruments;
- collection and presentation of evaluation results; and
- preparation of year end reports.

The following is an interpretive review of the literature regarding HIV prevention for injection drug users (IDU). The intent of this review is to provide a brief overview of key concepts and issues of interest to those who work and volunteer in the fields of HIV prevention and injection drug use in Alberta.

¹ The term "non prescription needle use" (NPNU) encompasses injections for the purposes of ingesting drugs and steroids, as well as for tattooing, and body piercing. The more common term "injection drug use" (IDU) is also used in this report.

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*Determinants continued;***Implications:**

Health services must be sensitive to the many, broad factors that determine health and risk behaviors. For example, the following factors and many more determine injection drug users' health:

- Individual - genetic endowment, education, employment;
- Physical Environment - homelessness, law enforcement, shooting galleries;
- Social - family and peer supports, social assistance, culture; and
- Services - accessibility, efficacy, cost.

Future HIV prevention programming must continue to broaden its base to include a wider range of service providers, including other influential agencies in injection drug users' lives (e.g. workplace, family, leisure).

Harm Reduction

Harm reduction is pragmatic, scientific, and guided by humanitarian public health principles. Its primary goal is to reduce the negative effects or harms of any behavior. Harm reduction recognizes that, for individuals and society, risk behaviors often have both positive and negative aspects. The theory suggests that behaviors and attitudes can be broken down into incremental steps in order to discover ways to minimize negative consequences (Riley, 1994).

Implications:

The first priority is to decrease the negative consequences of drug use. Perhaps the most harmful aspect of injection drug use is the prospect of HIV and other infections. Injection drug users benefit from information about different drugs, the law and their legal rights, how to reduce risks, and where to get help. The desired outcome is the development of skills in assessment, judgment, communication, assertiveness, conflict resolution, decision-making, and safer drug use.

Community Development

Health is related to a sense of control; people are healthier if they are involved in the decisions that affect their health. Programs and service delivery are better if they are shaped by the people most affected by them, i.e. the clients. The essence of community development is a shift from "What are the needs and how can we meet them?" to focus on "What are the strengths and capacities in the community and how can we support and build on these?" (Sykes & Wolfe, 1995, p. 7).

*Community Development continued;***Implications:**

Programs should build on inherent strengths within drug using communities, and provide support where gaps and weaknesses exist. Community development raises challenges when working with the disenfranchised, or those involved in illicit and illegal behaviors. Enhancing self-esteem is a prerequisite to the adoption of safer behaviors. The history and early success of AIDS prevention (for example, AIDS service organizations, and needle exchanges) provides a strong testament to community development principles.

Stages of Change

This theory describes change by breaking it down into a process, and interventions are then designed to increase motivation to change. The theory, developed in the smoking addictions field, has a wider application to risk and addiction behavior modification. Widely used in clinical settings, the theory has recently begun to be tested as a way to describe audiences segmented for prevention messages.

The theory suggests that the modification of addictive or risky behavior involves a progression through five stages:

- pre-contemplative (i.e. unaware of need to change);
- contemplative (i.e. considering need to change);
- preparation (i.e. planning for change);
- action (i.e. implementing change); and
- maintenance (i.e. consistent adoption of behavior change) (DiClemente et al., 1991; Prochaska et al., 1992; Prochaska et al., 1994).

Implications:

Most injection drug users have tried to control their drug use or give up drugs, even after long periods of addiction. Relapse is part of the change process and is frequent (Roy & Cloutier, 1994). Typically, individuals cycle through the five stages of change several times before ending risky or addictive behaviors. The theory can apply to injection drug use and sexual risks. Service providers can validate users' reasons for not changing, while supporting users' self-discovery of reasons to change risk behaviors. An intervention or message may successfully reach users who are in one stage of change, but not effectively reach others. The theory suggests that a comprehensive range of interventions must be adopted.

WHAT IS THE CURRENT PICTURE OF HIV AND DRUG USE?

What is the baseline epidemiology for injection drug use or for HIV infections? This information is crucial to a better understanding of the reach and effectiveness of current programming. It is difficult to get an accurate picture due to the stigma and illegality of many HIV-related risk behaviors associated with injection drug use.

Potential sources of information about injection drug use and HIV, not prominent in this literature search, are: STD clinics, HIV clinics, treatment centres, court and prison statistics, and HIV serological testing data (including both negative and positive test results). Information from these sources is only sporadically published, and is usually concerned with specific, time-limited projects. However, the regular, consistent, and accessible reporting of this data is not currently happening.

Injection Drug Use

There are an estimated 50,000 to 100,000 injection drug users in Canada (Addiction Research Foundation, 1993).

The Canadian Centre on Substance Abuse has started a national study on drug and substance use in Canada, including injection drug use. Alberta, through the Foothills Hospital in Calgary, is a participating member in this major initiative. This study should begin to provide baseline data on the incidence of needle use in the province later in 1996 (Riley, 1995).

Individuals who request HIV testing cite reasons (risk factors) for wanting to be tested. Alberta Health reports risk factors for HIV positive tests, but not for HIV negative tests. This is a source of untapped data on the reported prevalence of injection drug use and unsafe injection practices.

HIV and AIDS

To the end of 1995, there have been 12,670 people diagnosed as having AIDS in Canada (Health Canada, 1996).

In Alberta, to the end of February 1996, there have been 822 people diagnosed with AIDS and 2,590 HIV positive tests (Alberta Health, 1996).

Injection Drug Use and HIV/AIDS

In Canada, to the end of 1995, there have been 436 injection drug users diagnosed with AIDS, and an additional 526 persons under the joint risk category "Men who have sex with men/IDU". In total, these categories represent 7.6% of all persons who have been diagnosed as having AIDS (Health Canada, 1996).

HIV has spread in varying degrees among various populations of Canadian drug users. In Montreal, prevalence varies from 4.8% to 20%. In Toronto, prevalence rates range from 1.0% to 5.7%. In Winnipeg and Vancouver, the rates are respectively 2.3% and 3.0% (Bruneau, 1994, p. 48).

In Alberta, to the end of February 1996, there have been 29 injection drug users diagnosed with AIDS and 275 with HIV positive tests. The proportion of HIV positive tests that can be attributed to injection drug use is steadily increasing. In total, injection drug users represent 10.6% of all person who have tested positive for HIV since 1986. In 1995, 23.4% of all HIV positive tests were from users (Alberta Health, 1996).

Of 137 saliva samples taken from Streetworks injection drug use clients in 1994 (an Edmonton-based harm reduction program with a needle exchange component), eight were HIV positive and one was indeterminate (Wolfe, 1994, p. 4).

Implications

Injection drug use and HIV, a volatile epidemic

International studies show that without intervention, rates of HIV infection in injection drug users can skyrocket in short periods.

"Experts around the world agree that intensive efforts to keep infection rates among injection drug users below 10% are necessary. If infection levels go beyond this, the epidemic can become explosive in nature as has been seen in several cities around the world" (Second National Workshop, 1994, p. 6; Des Jarlais et al., 1995, p. 1226).

Early intervention is a key to success

Studies also show that early intervention ("defined as beginning when HIV seroprevalence was <5%") in a community can hold HIV rates steady over a period of time (Des Jarlais et al., 1995, p. 1227).

"In sharp contrast [to explosive rates in some locations], however, there are also areas where HIV was introduced into the local population of injection drug users, but where HIV seroprevalence among users has remained low and stable for extended periods" (ibid., p. 1226).

Containing the epidemic is a success

HIV prevention programs cannot protect all of the people all of the time. However, each infection averted is a measure of success, and containing infection below critical rates in the drug using population is vital. A thorough, scientific review of HIV programming demonstrates that long-term behavior change can be achieved (Fact Sheet - Does HIV Prevention Work?, 1995, p. 1).

"In low-seroprevalence areas, it appears possible to severely limit transmission of HIV among populations of IDUs, despite continuing risk behavior among a substantial proportion of the population" (Des Jarlais et al., 1995, p. 1226).

Direct and indirect costs associated with HIV and drug abuse are enormous

In 1991, the average length of stay in a Vancouver hospital for IDU with AIDS was 131.3 days. At an average of \$1,200 per day, this translates into a lifetime hospital cost of \$157,000 for each IDU living with AIDS. In economic, and human terms, this represents only the tip of the iceberg (Posen, 1991).

According to a study by the B.C. Centre for Excellence in HIV/AIDS, the indirect cost of AIDS in Canada between 1987 and 1992, a six-year period, was \$3.3 billion. The average loss of earning per AIDS death was \$651,200 which was surpassed only by heart disease, suicide, auto accidents and lung cancer. The average loss of production remained stable or declined for the other causes of death, but nearly doubled for AIDS over the six-year period. It is estimated that future production loss in Canada due to AIDS deaths will exceed \$1.5 billion in 1996 alone (Hanvelt, 1995).

The economic costs associated with IDU is even greater. The Alberta legal, law enforcement, and prison system expends millions each year to fight illicit drug use. The subsequent illegal activities associated with the "drug culture" drive up the social and economic costs of drug use in Alberta to staggering levels. US statistics estimate that over one million of its citizens inject drugs, at an estimated social cost of \$50 billion per year.

WHAT ARE THE RISKS ASSOCIATED WITH NEEDLE USE?

In addition to sharing needles, many social and economic consequences of supporting a drug habit can result in high risk situations (i.e. sex for drugs or money, abusive relationships, injecting/sexual interaction with at-risk populations, incarceration and subsequent limited access to clean equipment, etc.). Springer (1991) notes the relationships between drug use and HIV/AIDS:

1. Transmission through injection equipment;
2. The sex-drug link
 - a. Effect of cocaine [drugs] on libido
 - b. Sex for money or drugs
 - c. Mood-altering substances and risk reduction;
3. Immunosuppressive qualities of some drugs;
4. Pediatric HIV-drug connection; and
5. Role of injection routes and adulterated drugs (p. 145-146).

Knowledge

Most know the HIV prevention basics

"Virtually all [AADAC IDU clients admitted for treatment who completed a survey during a four month period in 1990] were aware that the AIDS virus can be transmitted by sharing needles, 96% knew that it could be spread during sexual intercourse, and 95% were aware that a woman could infect her unborn child" (Slavik & Faist, 1993, p. 22).

Streetworks is a community based HIV/IDU harm reduction program in Edmonton. Their 1992 study indicates a generally high level of awareness and knowledge of the basics of HIV transmission and its consequences (Wolfe & Sykes, 1992, p. 22).

Knowledge alone does not lead to behavior change

First, knowledge is not enough. Knowledge is a necessary precondition, but is often not enough to trigger behavior change.

Second, there continue to be gaps in basic knowledge. For example, in a 1991/1992 survey of 103 Calgary Health Services (CHS) needle exchange clients, 77% identified sharing needles as a mode of HIV transmission, 98% sexual contact, and 52% contact with infected blood. Only 3% were aware that a woman could infect her unborn child, and 12% showed misconceptions about transfer of the AIDS virus (e.g. through casual contact) (Elnitsky & Abernathy, 1993, p. 179).

Dirty Equipment

Used needles and equipment

In 1992 survey results, Streetworks reported that 53% of clients who had used the program for six months or less reported “never taking used needles”, while 61% of those who had used the program for more than 18 months “never took used needles”. In a 1994 follow-up study, there were varied results, but between 95% and 76% reported never sharing (Wolfe & Sykes, 1992, p. 25; Wolfe, 1995, p. 3).

For CHS clients in 1991/1992, 54% reported borrowing used needles over the past six months, and 53% reported lending used needles over the same time period. Just over half (55%) who reported borrowing stated they always cleaned the used needle (Elnitsky & Abemathy, 1993, p. 178).

In the 1990/1991 AADAC survey, 60% of clients reported sharing needles (James & Huebert, 1991, p. ii).

Cleaning practices

Cleaning needles and syringes with bleach solution is not as effective as once believed, but it is still a valuable harm reduction strategy. Bleach stiffens syringes, is hard on vein maintenance, and has a short shelf-life. Needle cleaning technique is often faulty in practice, leaving traces of blood in the injection equipment. “A new needle every time” is a safer message than “a clean needle every time”. However, cleaning needles does reduce the risk of HIV (de Burger & Redpath, 1994, p. 6).

Sixty percent of AADAC clients surveyed who shared needles said they shared because they had first cleaned equipment. Among those who shared, 56% reported cleaning equipment with hot water and 41% said they used bleach (James & Huebert, 1991, p. 8-9).

Just over half (55%) of CHS clients who borrowed needles reported that they always cleaned used needles (Elnitsky & Abernathy, 1993, p. 178).

In a Streetworks study in 1991, 72% of program users and 69% of non program users who shared needles reported always cleaning them. In 1992, the results were 67% for program users and 59% for non program users. In addition, program users were significantly more likely to report proper cleaning technique (63% program users, 36% non program users) (Wolfe & Sykes, 1992, p. 23).

Needing to share; Choosing to share

Of the AADAC clients surveyed who shared needles, 83% reported often sharing with up to three people at a time (James & Huebert, 1991, p. ii).

Studies (including AADAC, CUPS, and Streetworks) consistently show that unavailability of injection drug use equipment at the time of shooting up is the major barrier to the use of new needles.

Common sources of needles, in addition to needle exchanges, are friends, dealers, drug stores, shooting galleries, strangers, and family.

There are two distinct categories of sharing:

- **Sharing Out of Need**
(examples of related issues: access, affordability, in custody or prison); and
- **Sharing Out of Choice or due to Social Context**
(examples of related issues: availability, 'careful' partner selection, norms, peer pressure, enjoyment).

Social sharing is more amenable to interventions. Issues that surround the use of used injection drug equipment out of need are more difficult to address. It appears that there are many similar difficulties with the promotion of clean needle use and the promotion of condom use.

Equipment is often shared when someone else administers the drug. Over 40% of injection drug users occasionally or frequently rely on others to inject them and nearly 60% use equipment supplied by the person making the injection. This happens most frequently between male users and their sexual partners, rather than with other male (sic) injecting partners (Noel & Gagnon, 1993, cited in Roy & Cloutier, 1995, p.17).

Only 6% of AADAC clients reported cost as a determining factor in their sharing (James & Huebert, 1991, p. ii).

Type of Drug and Associated Risks

Choice of drugs

AADAC clients who inject report using primarily cocaine, heroin, and amphetamine injection, as well as speedballs (combined heroin, cocaine, amphetamine). A characteristic of Edmonton is a relatively high prevalence of injected Talwin and Ritalin (James & Huebert, 1991, p. 13).

CHS reports a large proportion of clients who frequently inject cocaine (Elnitsky & Abernathy, 1993, p. 178).

The literature is inconclusive regarding the effects of different drugs on risk behaviors, or a drug's physical properties on the transmissibility of HIV. Effects of cocaine on heightened sexual activity, and a correlation between multiple drug use and higher sexual and injection risk behavior have been reported.

Cocaine users inhale, smoke or inject the drug. Estimates suggest 10% to 25% inject. Nadeau (1994) reports that the chronic use of cocaine can lead men to have difficulties in maintaining an erection. This in turn, may lead users to forgo condoms out of concern over a reduction in sensation during protected intercourse.

Anabolic steroids

Steroids are taken orally and through intramuscular injection. Studies suggest steroid users are also more likely to use IV drugs. The prevalence of injecting vitamins is another area of concern, not discovered in this literature review.

The Canadian Centre for Drug-Free Sport surveyed 16,000 high school students in 1992-1993 about attitudes and use of steroids. A reported 2.8% (4.1% of males and 1.5% of females) claimed to have used steroids over the last year to enhance sport performance and to change appearance. A third of the steroid users said they injected the drugs. "Bodybuilder" gyms and ice arenas were sites where needle sharing was thought to be most prominent (1993, cited in Roy & Cloutier, 1994, p. 12-13). A difficult perception to overcome is that steroids are healthy, and steroid users are not real drug users.

Four cases have been reported where HIV was transmitted when syringes were used to inject steroids: two in the US (Sklarek et al., 1991; Scott and Scott, 1989) and one in France (Henrion et al., 1992), and one recently in Quebec (Roy & Cloutier, 1994, p. 15).

Steroids, an Alberta snapshot

At the Second National Workshop on HIV and Drug Use, held in Edmonton in 1994, it was evident that more work is necessary to better understand steroid use and the associated risks. In many respects, Alberta is on the leading edge of studying this issue. For example, the Alberta Sports Medicine Council has developed a school-based curriculum to prevent steroid use among students.

A description of two Alberta initiatives more specifically targeted to the injection of steroids follows:

Calgary Health Services: "Safe Flex"

"Practise Safe Flex" is a poster and pamphlet campaign that was launched in 1992 by Calgary Health Services based on a concept developed at North York (Toronto) Health Department. Calgary targeted gyms and fitness centres with the messages that addressed both steroid use and safer sex. Many facilities were reluctant at first to participate, but those who did had a positive response (Calgary Health Services, 1992).

Central Alberta AIDS Network Society: Red Deer Survey

In a 1996 Red Deer Study of steroid users, nine of ten respondents either injected or took steroids orally and injected. Four of the ten respondents had shared needles at one time. The needle cleaning techniques reported were boiling water and hydrogen peroxide, and alcohol. For the Red Deer respondents, issues revolved more around adequate medical care (non-judgmental advice) rather than access to needles. Red Deer steroid users did not consider themselves to be like other IDU. Needles were purchased mainly from pharmacies (CAANS, 1995).

Sexual Risks

Safer sex, a tough message

“The majority of injection drug users have non-injecting sexual partners” (Second National Workshop, 1994, p. 6).

Several studies report reduction in risk behaviors around needle use, while sex risk behaviors among injection drug users are less likely to change, in spite of interventions targeted to both risks.

There is a heavy reliance on the school system to teach about sexual health skills. Schools are inconsistent in what they teach, and not all injection drug users or their sexual partners finish high school. Sexual education does have demonstrated success if it goes beyond physiology, and addresses comprehensive skill development.

Availability of condoms, when they are needed, is a major hurdle.

Sex and drugs

Knowledge levels are often lower regarding sexual risks than drug risks and prevention measures. Intentions to practice safer sex may wane when one is intoxicated.

An Alberta Health survey of higher risk populations identifies “being drunk or high” as a primary risk factor in the failure to practice risk reduction among male, female, older, younger, urban, smaller cities, heterosexual and homosexual respondents (Alberta Management Group, 1992).

Risk takers are risk takers, those who share needles are less likely to practice safer sex (James & Huebert, 1991, p. 14).

Indirectly, drug use is also associated with prostitution. There is sex for drugs and money, and a high prevalence of drug use and needle sharing among prostitutes and clients. The level of unsafe sex can be determined by the clients’ (John’s) choice. Condom use among prostitutes is much less frequent with non-paying partners and in relationship sex.

There have been good results reported when drug workers have special training in sexual counselling (Singer et al., 1993).

Other Risks

Tattooing, electrolysis, and body piercing

Alberta's Health Standards and Guidelines for Personal Services were updated in October 1995. New health standards apply to tattoo, body piercing and electrolysis businesses. Alberta Health lists piercing, tattooing and electrolysis as potentially high risk activities, but generally safe when done by an experienced practitioner. The popularity and incidence of these activities is growing (Alberta Health, 1995b).

There were no HIV cases attributed to these activities discovered in this literature review. But, a theoretical risk exists, particularly with the practice of "home" piercing and tattooing. In some US cities, tattooing has been illegal since a mid-1960s outbreak of hepatitis B was traced to the use of unsterilized equipment (Larkin, 1993).

Stress and mental health

Stress over HIV testing can lead to a relapse into drug use. People may respond to the knowledge of infection by increasing their drug use.

In some studies, users who knew their serostatus were more likely to protect partners (IDU and sexual), as well as act for their own safety (Desenclos et al., 1993).

In some instances, the prevalence of psychopathology may make some injection drug users less receptive to HIV prevention messages. This population urgently needs greater access to mental health services. Interventions need to take into account the possibility of psychological impairment (Gibson et al., 1992). Also, antisocial personality disorder results in increased risk for HIV in injection drug users and difficulty in finding placements for services (Brooner et al., 1993).

Needle disposal

Negative public reaction to discarded needles and condoms in parks and on street corners can cause a backlash against harm reduction efforts. Some proactive programs have turned public opinion around, and provided opportunities for HIV education and media exposure.

A coalition of police, school boards, and parks and recreation have coordinated community needle pick-up drives, often in association with Boys' and Girls' Clubs. A community education effort in Toronto used print, 1-800 line, and local media to draw attention to, and coordinate, the safe disposal of needles in public places.

The Vancouver needle exchange offers sharps containers to taxis, hotels, and police cars. The needle exchange van collects the needles on its regular rounds (de Burger & Redpath, 1994, p. 7).

Is it high risk groups or high risk behaviors?

HIV does not discriminate. HIV is transmitted through specific risk behaviors. These behaviors place everyone at equal risk, regardless of age, race, gender or any other characteristic.

However, there can be no disputing the epidemiology. HIV is not affecting everyone equally. Gay and bisexual males were first hit hardest in North America. Now, women are quickly becoming the fastest growing category of new infections. The average age of infection continues to drop drastically. Although the epidemiology is scant, an epidemic among Aboriginals is emerging.

"The epidemic we recognize consists of a series of smaller HIV outbreaks each one of which is affecting a particular group. For example, the HIV epidemic in Canada is a composite of smaller outbreaks in injection drug users, young gay men, women, natives, street involved youth, commercial sex workers and so forth" (O'Shaughnessy, 1994, p. 68).

PROGRAM MODELS

Multiple Approaches

Move now, on many fronts

"Results indicate a substantial potential for AIDS risk reduction among minority IV drug users that can be addressed immediately. Undoubtedly many components of the social deprivation of minority communities will have to be addressed in order to reduce the excessive rates of IV drug use within those communities; and it is probable that substantial progress in improving the social situation of minorities would facilitate AIDS prevention among them. Nonetheless, with respect to AIDS prevention, there is much that can and must be done immediately to reduce the spread of HIV among both majority and minority IV drug users" (Des Jarlais & Friedman, 1989, p. 32).

Some injection drug users are more open to change

Newer injectors often have better needle hygiene and inject less frequently (Starley et al., 1993). This makes new injectors an important group for HIV prevention efforts.

Starting early in peoples' injection drug use means starting young. Half of those interviewed in a Streetworks survey first injected between the ages of 14 and 19 years, 12% under the age of 14 (Wolfe & Sykes, 1992, p. 19). Injectors who begin at a younger age often have higher levels of risk behavior (Battjes et al., 1992). Younger females also have greater sexual risks than either males, or older users.

Less frequent injectors were much more likely to adopt safer needle-use practices than were daily drug injectors, regardless of intervention track. The results suggest that more intensive interventions have advantages over minimalist efforts - in specific contexts (Siegal et al., 1995, p. 308).

Harm Reduction Programs with Needle Exchange

Programs with needle exchange typically provide a wide range of services. Firmly rooted in health promotion principles, harm reduction programs with needle exchange address HIV prevention and education within the wider context of clients' other concerns. Some common services provided by these programs are:

needle exchange
hepatitis B vaccine
pre/post test counselling
condom distribution
treatment referral
counselling/listening

AIDS prevention and education
bleach kits
HIV testing
outreach
STD/birth control information
TB treatment (Vancouver)

Harm reduction and needle exchange

"The spread of HIV and other infectious diseases (e.g. hepatitis B and HTLV-I/II) through shared injection equipment is a far greater danger to the individual and to the public health in general, compared to the harm associated with drug use. As a harm reduction strategy, needle exchange is considered to be a sensible and pragmatic approach to improving the overall health of injection drug users" (Cain, 1994, p. 18).

Needle exchange reduces rates of hepatitis B and C. Several dispense TB medication.

Do harm reduction programs with needle exchange lead to more drug use?

"Despite initial concerns that needle exchange would appear to condone drug use, the researchers indicate there is no evidence in the literature, or from experience in the field, that the introduction of needle exchange programs has led to an increase in drug use, or a lowering of the average age of first time Intravenous Drug Users. In fact, it is becoming recognized that needle exchange is often the first line of approach for IDU's who have opted to seek drug counselling and referral to detox clinics." (Ibid., p. 18).

Does needle exchange work?

"Given the special non-judgmental, non-threatening stance of the needle exchange, this may be one of the only venues of neutral contact and communication between street addicts and the world of the professionals and helping services." (Ibid., p. 20).

"Most needle exchanges also [in addition to needle exchange] instruct clients in safe drug use and injection techniques, as well as making referrals to everything from alcohol and drug counselling to HIV testing to medical intervention to Social Services. In practical terms, this provision of information and equipment may be one of the only effective vehicles to prevent a greater epidemic of HIV and the resultant AIDS deaths." (Ibid., p. 18).

Most evaluations of exchange programs look at "the proportion of injection drug users served, the number of needles exchanged, the percentage of needles recovered, and the overall cost effectiveness." (Ibid., p. 19).

The Montreal CACTUS exchange reports puzzling and, on first blush, contrary results. CACTUS clients have an HIV prevalence rate of 11.6% to 15.3%; compared with an overall prevalence of 3.5% among users. Compared to other injection drug users, clients are: older, earn lower revenues, and have fewer social supports. They also frequent shooting galleries more often, know more HIV infected persons, and share needles more with such persons. Male clients are more involved in prostitution than non-clients (Bruneau, 1994).

The CACTUS findings suggest that: needle exchange was introduced late in their epidemic (over 10% prevalence), it reaches particularly high risk users, possibly an insufficient number of needles are distributed, and social networks of needle sharers may have developed (Bruneau, 1994, p. 49; Remis, 1996).

Is needle exchange cost-effective?

A mathematical model developed in the US estimates a possible 33% reduction in the rate of HIV infections among needle exchange clients. Some CDC estimates suggest that this is a low estimate. Budgets vary according to services provided, but when infection reductions are considered for clients, sex partners, and offspring, US estimates place the cost of needle exchange at \$9,400 per infection averted.

Refer to the description of direct and indirect costs associated with HIV and drug use on page 6.

Drug Stores and Pharmacies

Pharmacists deliver many harm reduction programs, sell condoms, needles, and in some instances dispense methadone. In Canada, many distribute needle exchange pamphlets with the purchase of needles. In the UK, some automatically give away packs of swabs, condoms, a minisharp box, and HIV information with all needles and syringes that are sold.

The 1995 study of Canadian Community Pharmacies found that 83% of pharmacists said they would sell needles to non-diabetics in "some cases", and 25% "in all cases". About 50% would provide free needles as part of a program, but only 13% supported needle exchange without counselling and 11% supported sales through vending machines in pharmacies (Myers et al., 1995, p. 32).

In 1988, the Canadian Pharmaceutical Association adopted a policy recognizing its members have "an ethical, moral, and public responsibility" to prevent AIDS through the continued accessibility of latex condoms and through counselling on their use; the provision of needles and syringes to IDU as permitted under federal and provincial regulations; and the provision of comprehensive educational material on HIV (Myers et al., 1995, p. 3).

In Alberta, the availability of needles through pharmacies is inconsistent. All respondents to a Red Deer steroid user survey indicate that their needles come from pharmacies, but most drive to another town to purchase them (CAANS, 1995). Several organizations quietly prepare lists of drug stores where needles can be purchased without a hassle, to assist their clients who inject drugs.

The availability of clean needles (and the ability to drop off dirty needles) at pharmacies offers several advantages over community outreach programs. Drug stores are in all communities, open all week for extended hours, and are in more convenient locations for many injection drug users. However, pharmacists cannot provide the same level of services as existing harm reduction programs. Drug stores offer a possible means of ensuring that access to needles, condoms, and information is more consistently available across the province.

Outreach, Self-Help and Support Groups

Community outreach, peer-led and working within existing social networks, has proven to result in significant reductions in sharing needles over the long-term. The skills of injection drug users and the injection drug using community are critical resources in the fight against HIV infection.

A number of studies (including Birkel et al., 1993; Brown & Needle, 1994; McCoy et al., 1993) report outreach success in:

- teaching HIV prevention skills;
- surveying injection and condom use practices;
- distributing bleach and condom kits, prevention materials;
- counselling, health screening, drug treatment; and
- decreasing drug taking behavior and preparation for entering treatment.

Outreach has not been as successful in changing high risk sexual behaviors.

Treatment Centres

Counselling on the safer use of needles and safer sex practices should become a routine component of the standard substance abuse treatment package. One study found HIV education and intervention programs appeared most effective when emphasized in the earliest phases of treatment (less than 4 months) (Boatler et al., 1994). Treatment centre staff who have been trained in sexuality counselling have had some success in changing clients' sexual risk behaviors (Singer et al., 1993).

Methadone treatment programs

Methadone is used as a treatment module and is a positive force in harm reduction, particularly considering HIV, IV drug use, and tuberculosis (Cain, 1994, p. 30).

Various studies show that methadone programs can assist HIV prevention by:

- reducing the likelihood of injecting rather than changing injecting behavior;
- decreasing sexual risks by decreasing involvement in paid sex;
- increasing a sense of self-efficacy for HIV risk reduction; and
- providing relapse prevention programming, including HIV risk relapse (Caglehorn & Ross, 1995; Longshore et al., 1994).

"Methadone is the medication dispensed, not the treatment. The treatment is the process of seeing the people every day and providing psycho-social support for them. Effective treatment is composed of forming a working relationship with people who are or who have been at the bottom-most rungs of our society" (Harris, 1991, p. 67).

Methadone has the following advantages over street drugs:

- it lasts 24 hours, so once a day dosing is possible;
- users do not have to spend \$100 to \$500 a day on narcotics, decreasing crime;
- it is dispensed in a form that prevents its injection;
- clients are given a chance to stabilize lifestyles, and after this important step may work towards reducing their overall drug use (de Vlaming, 1995, p. 13).

Social Marketing

Alberta Health has run Facing AIDS multimedia campaigns since 1989. There has been little reference to injection drug use in the early campaigns, and no inclusion in the more recent efforts that are more targeted to motivate behavior change. The addition of some IDU messages in future campaigns could be achieved at very low cost.

Although some injection drug users are marginalized, the majority are media consumers and not significantly different in their media habits. Like other Albertans, the primary source of HIV/AIDS information among Streetworks clients was found to be TV. "Nearly three-quarters of those interviewed said they had learned most of what they know about HIV from television" (Wolfe & Sykes, 1992, p. v).

An Australian study found that injection drug users hours of viewing TV and listening to radio are similar to the general population (Ross et al., 1992). An HIV prevention media campaign in Italy was reported to slow rates of HIV conversion among IDU (Bortolotti et al., 1992).

A Five-City Study Demonstrates International Success

HIV among injection drug users was followed in a five-city study (Glasgow, Scotland; Lund, Sweden; Sydney, Australia; Tacoma, US; and Toronto, Canada). A variety of common characteristics and activities were found to exist.

Common characteristics across the five cities included:

- the relatively early initiation of programs;
- the large-scale provision of sterile injection equipment; and
- the involvement of community outreach to users.

Their community outreach component included:

- dissemination of HIV/AIDS information;
- provision of risk-reduction supplies;
- trust building between health care workers and users; and
- referrals to other services, such as drug abuse treatment and HIV counselling and testing.

Services were provided through:

- syringe exchange;
- a program to sell sterile needles and syringes in pharmacies to users;
- street outreach; and
- bleach distribution programs.

Two major findings were reported:

- large majorities of injection drug users reported deliberate risk reduction. Reduction in the sharing of injection equipment was the most cited behavior change; and
- even with risk reduction among users, there was still a substantial percentage who reported some recent HIV risk behavior [e.g. sharing needles].

The data from these five cities show:

- stable, low HIV seroprevalence among some injection drug use populations;
- low seroprevalence despite occasional risky injections among a substantial percentage of users in the population; and
- stable, low seroprevalence was associated with a distinct pattern of AIDS prevention programming (Des Jarlais et al., 1995, p. 1226-1230).

ALBERTA HIV PREVENTION PROGRAMS SPECIFICALLY FOR IDU

Harm Reduction Programs with Needle Exchange in Alberta

Calgary, Edmonton, and Grande Prairie have community-based programs that include needle exchange. Evaluation studies of Streetworks and the Calgary Injection Drug Education and Prevention Program provide detailed descriptions of these services. A very brief overview, based on information provided by the agencies during this project, is provided here. In a nutshell, these evaluations suggest a high level of client satisfaction with services, and general community acceptance of these programs.

Edmonton Streetworks (previously *Needleworks*)

Operating since 1990, Streetworks is a multi-faceted community-based HIV/AIDS prevention program targeting street involved IDU, sex trade workers and their sexual partners. The program's geographical boundary is Edmonton and area, concentrated in the northeast and urban core.

A Coordinating Committee (consisting of eight agencies) oversees policy, program design and government/funding relations. Edmonton Police Service also acts in a consultative role. At the delivery level, two agencies are responsible for daily operations.

Four fixed sites (Boyle McCauley, Boyle Street Co-Op, AIDS Network, Eastwood Health Centre), a van, and on-foot outreach are the primary entry points into the program. The van runs five nights per week on a roving schedule. The van provides information, needles, and condoms to a population not typically seen in the fixed sites. Nurses are available, so that health expertise is readily accessible.

A drug store initiative, involving eight pharmacies, is in place. Components of the pharmacy program include: needle drop (safe disposal), information resources, and syringes and needles sold at half price. Streetworks and the participating pharmacies are in regular contact, and provide mutual support and information to each other.

Streetworks in 1995 had 16,525 contacts with clients and approximately 400,000 needles were exchanged.

CONCEPTUAL MODEL OF STREETWORKS

GOAL

- To reduce the incidence of HIV infection within the target groups

OBJECTIVES

- To increase awareness of HIV infection and its consequences
- To assist target groups in improving their own health
- To provide service users with the skills, knowledge and resources needed to initiate or maintain safer sex or safer injection practices
- To facilitate access to supports and other services as needed
- To increase the knowledge and understanding of the community with the target group

STRATEGIES

- Harm reduction philosophy and methodology
- Health education
- Health promotion
- Community development
- Advocacy
- Nursing services

PROGRAM DELIVERY MECHANISMS

- Street outreach - on foot and van
- HIV prevention offices in community agencies

SERVICES - Target Population

- Provide information and tools for safer sex and safer injection practices
- Counselling as requested
- Program involvement of service users
- Health education
- Health protection, diagnostics, minor treatments
- Connection of service users with mainstream health and social supports and resources
- Advocacy as required

SERVICES - Community

- Increase knowledge and understanding among community agencies, organizations and individuals around the target population and harm reduction
- Explore and initiate action with partners

Calgary Injection Drug Education and Prevention Program

The Injection Drug Education and Prevention Program has both a fixed site and a van. The fixed site is at Calgary Urban Project Society (CUPS), a downtown health facility which has donated space for needle exchange. A nurse outreach worker from the Injection Drug Education and Prevention Program, Calgary Health Services, works specified hours every day that CUPS is open. When an outreach worker is unavailable, the "Rigs Room" is staffed by CUPS volunteers.

The van goes out into the community four nights per week. The outreach workers are contacted by pagers and service a wide area of the city. The van visits people who do not have access to the downtown site.

The program has steadily grown from 1,974 exchanges of 11,558 needles in 1991 to 4,600 exchanges of 178,370 needles in 1994. A return rate of over 95% was reported in 1994. All clients learned about the program through "word of mouth" (LeMarquand-Unich, 1995).

INJECTION DRUG EDUCATION AND PREVENTION PROGRAM - CALGARY HEALTH SERVICES

GOALS

- Toward a reduction or elimination of infectious disease
- Toward the elimination of substance abuse

OBJECTIVES

- Decrease the reported incidence of STD and reduce transmission of HIV
- Increase the appropriate use of practices that prevent the sexual transmission of communicable disease
- Decrease the proportion of Calgarians who use illicit drugs

Within the drug using community the following specific objectives are identified:

- Increase knowledge of HIV infection and its consequences among injection drug users
- Increase knowledge of HIV transmission among injection drug users, as it relates to unsafe injection and sexual practices
- Provide resources (needles, condoms, bleach and water) that enable injection drug users to follow safer injection and sexual practices
- Facilitate access to community support services by injection drug users wanting to pursue healthier lifestyle options, e.g. addiction treatment

South Peace AIDS Council Harm Reduction Needle Exchange

The South Peace AIDS Council "Exchange" project has operated since the summer of 1993.

GOAL

- To limit the spread of HIV in Grande Prairie and area

METHODS

- Supplying clean needles
- Providing latex condoms
- Providing "bleach kits" and information on safer cleaning of needles and rigs
- Providing clear, concise information to injection drug users and their partners about safer sex practices and testing
- Creating positive inroads into a hard to reach group
- Collaborating with like-minded community agencies

Initially, the project was operated from a van. Three casual workers were hired to work in teams of two. The van operated from 10pm to 2am on Friday and Saturday nights. The initial policy was to supply two clean needles for every one returned and hand out a maximum of ten needles at one time to an individual.

From the beginning, activity and acceptance of the van by the drug community was very slow. The use of the van ended in December 1993, and the mobile exchange has not been restarted.

The exchange now operates out of the SPAC offices. The policy is now to hand out five new needles per day to clients without used needles to exchange, and to exchange clean for used needles up to a limit of 100 per day.

Some progress has been made with exchanging clean needles through a local shooting gallery. Most clients are Native, and it has been found that Natives have a lower needle return rate. To February 1996, there have 3,769 needles in and 4,652 needles given out.

Other Alberta Initiatives with a Primary Focus on IDU and Harm Reduction

AADAC Opiate Dependency Program

To meet the specialized needs of the opiate addicted individual, the Opiate Dependency Program offers the use of methadone as a treatment modality. It involves community-based health care providers who participate in service delivery. The following description is based on information provided by the agency during this project.

AADAC OPIATE DEPENDENCY PROGRAM

OBJECTIVES

- Reduce the discomfort of withdrawal from opiates
- Maintain a normal lifestyle
- Provide a legitimate source of methadone for persons dependent on opiates
- Assist drug users in eliminating the criminal activity associated with drug seeking behavior
- Provide a bridge to an opiate free lifestyle

STRATEGIES

- Pharmacy services (methadone and other select medications)
- Counselling and medical services
- Urinalysis
- Referrals to community physicians

The general guidelines for admitting clients to this methadone program are: their opiate addiction is long term and they have unsuccessfully tried other forms of treatment. Exceptions are made in instances where clients are at high risk and unwilling to participate in other forms of treatment. In 1992, approximately 15% (n=45) of Edmonton area treatment program heroin/opiate clients were discharged.

During the first four to six weeks of treatment, clients are seen daily at the Treatment Centre to monitor their condition and adjust methadone dosages as needed. After four weeks, random urinalysis begins. Once clients' doses are stabilized and urinalysis results are negative, they are transferred to a community pharmacy to receive their daily dose.

During the stabilization phase, clients receive daily lifestyle counselling. After this phase, clients are seen twice a month by staff to discuss positive lifestyle changes, and provide interventions when crises occur or when urinalyses return positive.

AADAC Opiate Dependency Program continued;

After three months, a formal assessment is completed and clients establish goals for their treatment. Treatment may be facilitated by staff counselling, and/or referrals to other services such as employment counselling, life skills, and education.

Until 1992, the Treatment Centre's physician carried out all ongoing medical examinations and prescriptions of methadone. Since that time, community physicians have assumed ongoing medical management of clients after formal assessment and stabilization have been completed.

Voluntary withdrawal is encouraged, but remains solely the client's decision. Staff negotiate a withdrawal schedule and provide support throughout the withdrawal process (AADAC, 1992).

Prisons, HIV and IDU

Of AADAC 1991/1992 survey respondents who shared needles, 19.6% of men and 4.2% of women cited being in custody or prison as a reason for sharing (James & Huebert, 1991, p. 8).

It is often difficult for staff and inmates to admit that sex and drug use happens in prison. However, there are more injection drug users in prison than in all treatment programs in the province. This provides an excellent opportunity for education, treatment, and release follow-up.

Provincial jails have relatively high and quick turnover. The longest sentence in a provincial prison is two years less a day. The average length of stay is roughly 45 days. The Provincial AIDS Program has recently worked with Alberta Justice to update HIV prevention print and video resources used in prisons. Condoms are available, but are usually distributed through prison health staff. This is not an effective distribution method. Condoms are also put in the kits given to inmates upon release, and are made available at half-way houses.

Community AIDS organizations have held successful training sessions and lectures in a few facilities; while other facilities have had virtually no programming. A coordinated and consistent approach to HIV prevention for injection drug users in Alberta prisons is currently lacking (Kanigan, 1996).

The federal prison system faces a different challenge. Inmates are in for years, resulting in a greater likelihood of sexual activity and drug injection. The incidence of sex and drug use is not known, and is almost certainly under-reported. Condoms are available, but there is much controversy surrounding recommendations to distribute bleach and clean needles in prisons.

Aboriginal

The recently released Royal Commission on Aboriginal Peoples cited a general lack of knowledge about HIV/AIDS, and poor coordination between government and aboriginal services in Canada. The Commission found that the number of aboriginal AIDS cases has increased six-fold, jumping from 24 in 1990 to 153 in 1995. It also found that aboriginal women were twice as likely as non-aboriginal women to become HIV infected. Females represent about 14% of AIDS cases among aboriginals (Newhouse & Imrie, 1996).

Aboriginals make up 6% of Alberta's population. Over the past three years, 20% of HIV cases in northern Alberta have been aboriginals (Houston, 1996). The rates in southern Alberta are not as high, but there is growing concern (Gill, 1995).

Alberta is the first province to jointly fund HIV/AIDS initiatives with Medical Services Branch and the AIDS Community Action Plan (both of Health Canada).

* Provincial initiatives include:

- Aboriginal HIV/AIDS Survey
 - service providers' views on HIV/AIDS services on reserves and by health units;
- Survey of HIV/AIDS programs for Metis People
 - a follow-up study to the Aboriginal HIV/AIDS Survey;
- Aboriginal Resources Project
 - identification of audio visual and print resource needs of Native peoples;
- Alberta Health Aboriginal Project Grants
 - aboriginal organizations receive Major Project HIV/AIDS Community Organization grants through the Provincial AIDS Program;
- Aboriginal Health Strategy Fund, Alberta Health
 - the Fund supports proposals for local health initiatives involving partnerships between Aboriginal communities and Regional Health Authorities, provincial health boards and other health stakeholders.
 - 15 aboriginal organizations have been supported for HIV education activities, and there is the potential of more in the future;
- Feather of Hope Aboriginal AIDS Prevention Society
 - community-based programming and training is provided with a culturally appropriate approach;
- The Multi-Agency Committee on Aboriginal AIDS
 - a standing committee of representatives from federal and provincial government agencies and HIV and aboriginal organizations and services;
- HIV Prevention Among Aboriginal Peoples: A Collaborative Strategy
 - a consultant has been hired by Alberta Health to oversee a three-year collaborative effort to: empower communities, mobilize leadership, identify suitable roles and responsibilities, and encourage understanding of HIV.

* BASED ON ALBERTA HEALTH CORRESPONDENCE, 1995.

IMPLICATIONS FROM THE LITERATURE

The literature points to some encouraging findings. Early interventions from a multitude of sources can succeed in keeping HIV rates among non prescription needles users stable. Programming that is based on pragmatic and scientific outcomes is effectively reducing the harm associated with drug use and HIV.

Pragmatic, Non-judgmental Approaches

Programs for HIV prevention among non prescription needle users should address the specific risk behaviors associated with HIV transmission in a non-judgmental, pragmatic way. There are important differences between choosing and needing to use dirty injection equipment. Distinct strategies are required to address the differences between lending, borrowing, and renting used injection drug use equipment. The varying behavioral and physiological effects of different drugs must also be considered. The prevalence of unclean equipment used for steroid injections, tattooing, and body piercing is not well documented, and is a potential health concern.

In addition to injection practices, users have disproportionately high sexual risk. Interventions that have had some success in reducing needle sharing, have not been as successful in changing risky sexual practices. The link between drug use, sex and risk of HIV is strong, and examples of programming that successfully address this link are limited.

Environments, economic need, self-esteem, skills, and many other factors set the context in which risk and risk reduction take place. The broad determinants of health must be better understood before comprehensive programming for IDU can be recommended. Models of local and international programs that include a wide perspective offer some encouragement and direction.

Build on Inherent Strengths

Alberta has had a good start. A strong network of AIDS Service Organizations, STD clinics, regional health centres, HIV antibody testing and counselling sites, drug treatment programs, and other key agencies provides much of the HIV prevention infrastructure needed in the province. Harm reduction programs that include needle exchange, outreach, and counselling have enjoyed high rates of client satisfaction and general community acceptance.

There are many opportunities for new and improved program delivery and coordination. The restructuring of the provincial health system opens the way for greater community action. The Provincial AIDS Program, Alberta Health is developing of a new strategic plan to carry them to the year 2001. HIV prevention efforts in the provincial prison system, and programming for Aboriginal people have gained momentum.

Repeated studies show what works, and what has not. There are certainly areas of contention, but there is a strong, international consensus among programmers and public health workers about core program components and theoretical models.

The more difficult task is reaching a similar level of consensus on how to implement, fund, support and promote needed programming and policies. This involves convincing the uninitiated, the unconverted, and at times the uninterested. It also requires greater collaboration and trust. In some cases, it means giving up control or doing different things in different ways than in the past. It requires the political will to make it happen.

More work is necessary in many areas. Accessible information, and consistent outcome-based evaluations of current and future efforts are necessary to better inform program priorities. There is also an immediate need for a greater role for pharmacies, prisons, and law enforcement in HIV prevention efforts. Innovative, and largely untapped resources could be found in alliances with workplace, leisure, media, and business partners. The inherent strengths and capabilities of injection drug users and injection drug user communities must be mobilized and fostered.

To date, Alberta has responded to HIV/AIDS in a responsible and effective way. As our province enters the second decade of the HIV epidemic, the face of the disease is shifting. The opportunity to build on the inherent strengths and address the weaknesses of the past, must be taken to prevent the unnecessary suffering, costs, and other harms that go hand-in-hand with HIV infection among persons who use needles.

REFERENCES

- AADAC (Alberta Alcohol and Drug Abuse Commission). (1992). A Brief Description of the West End Treatment Centre Opiate Dependency Program. Edmonton, Alberta: West End Treatment Centre Opiate Dependency Program, AADAC.
- Addiction Research Foundation. (1993). Harm Reduction: A New Approach to Alcohol and Drug Problems (Best Advice Series). Toronto, Ontario: Author.
- Alberta Health. (1995a). The Determinants of Health: The Alberta Picture. Edmonton, Alberta: Health Planning Branch, Alberta Health.
- Alberta Health. (1995b). Health Standards and Guidelines for Personal Services. Edmonton, Alberta: Environmental Health, Alberta Health.
- Alberta Health. (1996). Alberta AIDS Surveillance, Summary to 29-February-1996. Edmonton, Alberta: Communicable Disease Control & Epidemiology, Alberta Health.
- Alberta Management Group. (1992). Listening to Albertans at Risk of HIV/AIDS: An Assessment of Risk Reduction Messages. Edmonton, Alberta: Alberta Health.
- Battjes, R.J., Leukefeld, C.G., & Pickens, R.W. (1992). Age at First Injection and HIV Risk among Intravenous Drug Users. American Journal of Drug and Alcohol Abuse, 18 (3), 263-273.
- Birkel, R.C., Golaszewski, T., Koman, J.J., Singh, B.K., et al. (1993). Findings from the Horizontes Acquired Immune Deficiency Syndrome Education Project: The Impact of Indigenous Outreach Workers as Change Agents for Injection Drug Users. Health Education Quarterly, 20 (4), 523-538.
- Boatler, J.F., Knight, K., & Simpson, D.D. (1994). Assessment of an AIDS Intervention Program During Drug Abuse Treatment. Journal of Substance Abuse Treatment, 11 (4), 367-372.
- Bortolotti, F., Stivanello, A., & Noventa, F., et al. (1992). Sustained AIDS Education Campaigns and Behavioural Changes in Italian Drug Abusers. European Journal of Epidemiology, 8, 264-267.
- Broner, R.K., Greenfield, L., Schmidt, C.W., & Bigelow, G. (1993). Antisocial Personality Disorder and HIV Infection among Intravenous Drug Abusers. American Journal of Psychiatry, 150 (1), 53-55.
- Brown, B.S., Needle, R.H. (1994). Modifying the Process of Treatment to Meet the Threat of AIDS. International Journal of the Addictions, 29 (13), 1739-1752.
- Bruneau, J. (1994). Prevalence, Incidence and Risk Factors of HIV for Drug Addicts Using Injectable Drugs. Second National Workshop on HIV, Alcohol, and Other Drug Use - Proceedings. (February 6-9, 1994). Edmonton, Alberta: 48-51.
- CAANS (Central Alberta AIDS Network Society). (1995). Survey of Steroid Users. Red Deer, Alberta: Unpublished document.

Cain, J.V. (1994). Report of the Task Force into Illicit Narcotic Overdose Deaths in British Columbia. Burnaby, British Columbia: Office of the Chief Coroner, Ministry of Attorney General.

Calgary Health Services. (1992). "Practise Safe Flex" Campaign. Calgary, Alberta: Calgary Health Services, Sexuality Division.

Canadian Centre for Drug-Free Sport (1993). National School Survey on Drugs and Sport. Gloucester, Ontario: Author.

Caplehorn, J.R., & Ross, M.W. (1995). Methadone Maintenance and the Likelihood of Risky Needle-Sharing. International Journal of the Addictions, 30 (6), 685-698.

de Burger, R. & Redpath, J. (Eds.). (1994). Savoir Faire HIV Prevention News. Ottawa, Ontario: Canadian Public Health Association's AIDS Program, 1 (Summer).

de Vlaming, S. (1995). Methadone and Other Treatment Interventions for High Risk Drug Users (A Proposal for a Three Year Pilot Project, Gastown Medical Clinic, Vancouver). Vancouver, British Columbia: Unpublished document, Appendix 1, Background on Methadone Treatment in B.C., p. 13.

Des Jarlais, D.C., & Friedman, S.R. (1989). Ethnic Differences in HIV Seroprevalence Rates Among Intravenous Drug Users. In AIDS and Intravenous Drug Abuse Among Minorities. Rockville, MD: National Institute on Drug Abuse, U.S. Department of Health and Human Services, 24-33.

Des Jarlais, D.C., Hagan, H., Friedman, S.R., Friedmann, P., Goldberg, D., Frischer, M., Green, S., Tunving, K., Ljungberg, B., Wodak, A., Ross, M., Purchase, D., Millson, M.E., & Myers, T. (1995). Maintaining Low HIV Seroprevalence in Populations of Injecting Drug Users. JAMA, 274 (15), 1226-1231.

Desenclos, J.C., Papaevangelou, G., & Ancelle-Park, R. (1993). Knowledge of HIV Serostatus and Preventive Behavior among European Drug Users. AIDS, 7 (10), 1371-1377.

DiClemente, C.C., Prochaska, J.O., Fairhurst, S.K., Velicer, W.F., Velasquez, M.M., & Rossi, J.S. (1991). The Process of Smoking Cessation: An Analysis of Precontemplation, Contemplation, and Preparation Stages of Change. Journal of Consulting and Clinical Psychology, 59 (2), 295-304.

Elnitsky, S.L. & Abernathy, T.J. (1993). Calgary's Needle Exchange Program: Profile of Injection Drug Users. Canadian Journal of Public Health, 84 (3), 177-180.

Fact Sheets. (1995). Publications of HIV Prevention: Looking Back, Looking Ahead, a project of the Centre for AIDS Prevention Studies (CAPS), University of California, San Francisco, and the Harvard AIDS Institute. (For copies: Kaiser Family Foundation Publication Request Line 1-800-656-4533).

Gibson, D.R., Lovelle-Drache, J., Young, M., & Chesney, M. (1992). HIV Risk Linked to Psychopathology in IV Drug Users. Cited in AIDS Weekly, July 27, 1992, 25-26.

Gill, J. (1996). Southern Alberta HIV Clinic, Foothills Hospital, Calgary, Alberta. (Cited in Calgary Herald, January 31, 1996, Section A).

Hanvelt, R. (1995). B.C. Centre for Excellence in HIV/AIDS, Vancouver, British Columbia. (Cited in Edmonton Journal, July 7, 1995).

Harris, Y. (1991). Persons with HIV on Methadone Maintenance. In M. Shernoff (Ed.), (1991). Counselling Chemically Dependent People with HIV Illness. New York: The Haworth Press, Inc., 67-77.

Health Canada. (January 1996). Quarterly Surveillance Update: AIDS in Canada. Ottawa, Ontario: Division of HIV/AIDS Surveillance, Bureau of HIV/AIDS and STD, Laboratory Centre for Disease Control, Health Canada.

Houston, S. (1995). Human Immunodeficiency Virus and Alberta Aboriginal People. Prairie Medical Journal, 65 (1), 15-17.

James, D., & Huebert, K. (1991). HIV Risk Behaviours Among Addictions Clients. Alberta: Policy and Program Analysis, Alberta Alcohol and Drug Abuse Commission.

Kanigan, E. (Provincial AIDS Program, Alberta Health). (March 1996). Personal Communication.

Larkin, M. (1993). Tattooing in the '90s: Ancient Art Requires Care and Caution. FDA Consumer, 27 (8), 28-33.

LeMarquand-Unich, B. (1995). Evaluation of Injection Drug Education and Prevention Program. Calgary Alberta: Communicable Disease Program, Calgary Health Services.

Longshore, D., Hsieh, S.C., & Anglin, M.D. (1994). Reducing HIV Risk Behavior among Injection Drug Users: Effect of Methadone Maintenance Treatment on Number of Sex Partners. International Journal of the Addictions, 29 (6), 741-757.

McCoy, C.B., Rivers, J.E., Khoury, E.L. (1993). An Emerging Public Health Model for Reducing AIDS-Related Risk Behavior Among Injecting Drug Users and Their Sexual Partners. Drugs and Society, 7 (3-4), 143-159.

Myers, T., Cockerill, R., Millson, P., Rankin, J., & Worthington, C. (1995). Canadian Community Pharmacies HIV/AIDS Prevention and Health Promotion: Results of a National Survey. Toronto, Ontario: University of Toronto.

Nadeau, L. (1994). Risk Taking Contexts Among Addicts. Second National Workshop on HIV, Alcohol, and Other Drug Use - Proceedings. (February 6-9, 1994). Edmonton, Alberta: 22-25.

Newhouse, D., & Imrie, R. (1996). Aboriginal People and HIV/AIDS in Canada. Peterborough, Ontario: Trent University.

O'Shaughnessy, M. (1994). A Canadian Perspective. Second National Workshop on HIV, Alcohol and Other Drug Use - Proceedings. (February 6-9, 1994). Edmonton, Alberta: 68-72.

Posen, A.S. (1991). Economic Implications of Vancouver's Needle Exchange Program. Vancouver, British Columbia: Downtown Eastside Youth Activities Society.

Prochaska, J.O., DiClemente, C.C., & Norcross, J.C. (1992). In Search of How People Change Applications to Addictive Behaviors. American Psychologist, September, 1102-1114.

Prochaska, J.O., Velicer, W.F., Rossi, J.S., Goldstein, M.G., Marcus, B.H., Rakowski, W., Fiore, C., Harlow, L.L., Redding, C.A., Rosenbloom, D., & Rossi, S.R. (1994). Stages of Change and Decisional Balance for 12 Problem Behaviors. Health Psychology, 13 (1), 39-46.

Remis, R. (Centre for AIDS Study, Public Health Unit, Montreal General Hospital). (March 25, 1996). Personal Communication with K. Walls, Provincial AIDS Program, Alberta Health.

Riley, D. (1994). The Harm Reduction Model Pragmatic Approaches to Drug Use for the Area Between Intolerance and Neglect. Toronto, Ontario: Canadian Centre on Substance Abuse.

Riley, D. (Canadian Centre on Substance Abuse). (September 1995). Personal Communication.

Ross, M.W., Chapman, S., Wodak, A., Miller, M., & Gold, J. (1992). Media Sources of HIV/AIDS Information in Injecting Drug Users. Australian Journal of Public Health, 16 (3), 324-327.

Roy, D., & Cloutier, R. (1994). Drug Use and the HIV Epidemic A Frame of Reference for Prevention. Montreal, Quebec: Centre quebecois de coordination sur le sida.

Second National Workshop on HIV, Alcohol and Other Drug Use - Proceedings. (February 6-9, 1994). Edmonton, Alberta: 6-8.

Siegal, H.A., Falck, R.S., Carlson, R.G., & Wang, J. (1995). Reducing HIV Needle Risk Behaviors Among Injection-Drug Users in the Midwest: An Evaluation of the Efficacy of Standard and Enhanced Interventions. AIDS Education and Prevention, 7 (4), 308-319.

Singer, N., Phillips, K.C., White, D.G., & Mulleady, G. (1993). The Impact of Training in Sexual Counselling for Drugs Workers upon HIV Related Risk Behaviours and Attitudes among Injecting Drug Users. Counselling Psychology Quarterly, 6(2), 109-120.

Slavik, W., & Faist, R. (1993). Alcohol and Drugs in Alberta Perspectives on Their Use and Effects. Alberta: Information and Program Development Services, Alberta Alcohol and Drug Abuse Commission.

Springer, E. (1991). Effective AIDS Prevention with Active Drug Users: The Harm Reduction Model. In M. Shernoff (Ed.), (1991). Counselling Chemically Dependent People with HIV Illness. New York: The Haworth Press, Inc., 141-157.

Starley, B.S., Estilo, M., & Watters, J. (1993). Characteristics and Risk Behaviors of New Drug Injectors. International Conference on AIDS (IX), June 6-11, 1993, 9 (2), 707 (Abstract number PO-C15-2939).

Sykes, B., & Wolfe, R. (1995). Caring Together: Building Supportive Communities for People Living with HIV, Summary Evaluation Report. Edmonton, Alberta: AIDS Network of Edmonton Society.

Wolfe, R., & Sykes, B. (1992). Needleworks: Prevention of HIV in Injection Drug Users Final Report and Evaluation. Edmonton, Alberta: Edmonton Board of Health.

Wolfe, R. (1995). Needleworks: Prevention of HIV in Injection Drug Users Report of Evaluation: 1994 Follow-up. Edmonton, Alberta: Edmonton Board of Health.

REFERENCES NOT CITED

Battjes, R.J., Leukefeld, C.G., & Amsel, Z. (1990). Community Prevention Efforts to Reduce the Spread of AIDS Associated With Intravenous Drug Abuse. In C.G. Leukefeld, R.J. Battjes, & Z. Amsel (Eds.), (1990). AIDS and Intravenous Drug Use: Future Directions for Community-Based Prevention Research. Rockville, MD: National Institute on Drug Abuse, U.S. Department of Health and Human Services, 288-299.

Blair, C. (1995). "Setting the Stage" for Strategic Planning for Alberta's Continued Response to HIV/AIDS to the Year 2000. Edmonton, Alberta: Alberta Health.

Chitwood, D.D., Inciardi, J.A., McBride, D.C., McCoy, C.B., McCoy, H.V., & Trapido, E. (1991). A Community Approach to AIDS Intervention Exploring the Miami Outreach Project for Injecting Drug Users and Other High Risk Groups. New York: Greenwood Press.

Clark, S.C. (1988). An AIDS Primer for Helping Professionals and Educators. Edmonton, Alberta: Alberta Alcohol and Drug Abuse Commission.

Creative Research International. (1994). Intrinsic Values of Sport Qualitative Research. Gloucester, Ontario: Canadian Centre for Drug-Free Sport.

Des Jarlais, D.C., & Friedman, S.R. (1989). AIDS and IV Drug Use. Science, 245 (4918), 578.

Friedman, S.R. & Lipton, D.S. (1991). Cocaine, AIDS and IV Drug Use (Editorial). In B. Stimmel, S.R. Friedman, & D.S. Lipton (Eds.), (1991). Cocaine, AIDS, and Intravenous Drug Use. New York: Harrington Park Press, 1-11.

Joint National Committee on Aboriginal AIDS Education and Prevention. (1990). Recommendations for a National Strategy on Aboriginal AIDS Education and Prevention. Ottawa, Ontario: Health and Welfare Canada. (Cat. No. H43-53/19-1990E/ISBN 0-662-18060-7).

King, A.J.C., Beazley, R.P., Warren, W. K., Hankins, C.A., Robertson, A.S., & Radford, J.L. (November 1988). Canada Youth and AIDS Study. Kingston, Ontario: Queen's University.

Longshore, D., & Anglin, M.D. (1995). Intentions to Share Injection Paraphernalia: An Empirical Test of the AIDS Risk Reduction Model among Injection Drug Users. The International Journal of the Addictions, 30 (3), 305-321.

Lurie, P., & Reingold, A.L. (1993). The Public Health Impact of Needle Exchange Programs in the United States and Abroad. San Francisco, California: University of California.

Maccoby, N. (1990). Communication and Health Education Research: Potential Sources for Education for Prevention of Drug Use. In C.G. Leukefeld, R.J. Battjes, & Z. Amsel (Eds.), (1990). AIDS and Intravenous Drug Use: Future Directions for Community-Based Prevention Research. Rockville, MD: National Institute on Drug Abuse, U.S. Department of Health and Human Services, 1-23.

Mathias, A. (1994). Ethno-Cultural Issues. Second National Workshop on HIV, Alcohol and Other Drug Use - Proceedings. (February 6-9, 1994). Edmonton, Alberta: 54-55.

Maticka-Tyndale, E. (1995). Can We? Have We? Prevention of Sexual Transmission of HIV. The Canadian Journal of Human Sexuality, 4 (2), 79-102.

Pickens, R.W. (1989). Foreword. In AIDS and Intravenous Drug Abuse Among Minorities. Rockville, MD: National Institute on Drug Abuse, U.S. Department of Health and Human Services.

Radford, J.L., King, A.J.C., & Warren, W.K. (1989). Street Youth & AIDS. Kingston, Ontario: Queen's University.

Rowell, R.M., & Kusterer, H. (1991). Care of HIV Infected Native American Substance Abusers. In M. Shernoff (Ed.), (1991). Counselling Chemically Dependent People with HIV Illness. New York: The Haworth Press, Inc., 91-103.

Sibthorpe, B., Fleming, D., & Gould, J. (1994). Self-Help Groups: A Key to HIV Risk Reduction for High-Risk Injection Drug Users? Journal of Acquired Immune Deficiency Syndromes, 7 (6), 592-598.

Sorensen, J.L. (1991). Preventing HIV Transmission in Drug Treatment Programs: What Works? In B. Stimmel, S.R. Friedman, & D.S. Lipton (Eds.), (1991). Cocaine, AIDS, and Intravenous Drug Use. New York: Harrington Park Press, 67-79.

Sorensen, J.L., Wermuth, L.A., Gibson, D.R., Choi, K.H., Guydish, J.R., & Batki, S.L. (1991). Preventing AIDS in Drug Users and Their Sexual Partners. New York: The Guilford Press.

Stimson, G.V., Eaton, G., Rhodes, T., & Power, R. (1994). Potential Development of Community Oriented HIV Outreach among Drug Injectors in the UK. Addiction, 89 (10), 1601-1611.

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